

## ABSTRACT

In an OFDM packet communication receiver, the deterioration of received signal quality is suppressed, even when carrier frequency error and/or clock frequency error exists between a transmitter and a receiver, and/or phase noise and/or thermal noise is superimposed to a received signal in a receiver. The receive system comprises a channel estimate means (106) for channel estimation by using subcarriers separated by a Fourier transformation, a coherent detection means (107) for coherent detection of subcarriers by using result of channel estimation of an output of said channel estimate means, a clock frequency error estimate means (108, 110, 111) for estimating phase rotation ( $\Delta \theta$ ) of each subcarriers caused by clock frequency error ( $f_{RCLK} - f_{TCLK}$ ) by detecting phase rotation or accumulated phase rotation between coherent detected signal (R1, R2) and related reference signal (S1 through S16) by using a part of or all of the coherent detected signals, and a phase compensation means (109) for compensating phase rotation of coherent detected signal according to estimated clock frequency error. Phase compensated signal is applied to a decision means (112) for deciding 1 or 0 of a symbol.

(Fig.1)